[illegible], B.B.; ARTAMONOVSKIY, O Yu.; GEOGIYEV, Yu.F.; YUPATOV, E.V.
SHOL', O.A.

Investigating an underground bulldozer-loader at the Dzhezkazgan Mine. Trudy Inst. gor. dela AN Kazakh. SSR 13:98-114 '64. (MIRA 17:7)

GEORGIYEV, Yu.F.; SHOL', O. A.; YUPATOV, E.V.

Effect of power supply systems of a section on the operation of self-propelled equipment. Trudy Inst. gor. dela AN Kazakh. SSR 13:115-119 '64. (MIRA 17:7)

SHOL', V.A., student IV kursa

Structure of the sternal sections of ribs; rib cartilage. Trudy AZVI 9:352-357 '56. (MIRA 15:4)

1. Iz kafedry normal'noy anatomii (Zav. kafedroy - akademik, zasluzhennyy deyatel' nauki KazSSR, doktor prof. B.A.Dombrovskiy) Alma-Atinskogo zooveterinarnogo instituta.
(Ribs)

Country : USSR
Category: Human and Animal Morphology (Normal and Pathological). Skeleton.

S

Abs Jour: RZhBiol., No 2, 1959, No 7601.

Author : Shol', V.A.
Inst : Alma-Ata Zoological-Veterinary Institute.
Title : On the Structure of Sternal Parts of Ribs (Costal Cartilages).

Orig Pub: Tr Alma-Atinsk. zoovet. in-ta, 1956, 9, 352-357

Abstract: Sternal parts of ribs of three adult horses, one hourse embryo (6-7 month), three adult specimens of long horn cattle, one calf aged 1½ month, two cow embryos 5-7 mo., one 5-6 month old goat and three dogs aged 3-4 years were studied microscopically in saw cuts and from the surface. Considerable age-group and species-wise mor-

Card : 1/2

S

Country : USSR
Category: Human and Animal Morphology (Normal and Pathological). Skeleton.

Abs Jour: RZhBiol., No 2, 1959, No 7601

phological differentiations in the rib structure of compared animals were discovered. -- E.D. Davydova

Card : 2/2

SHOL', V.A.

A case of coenurosis in swine. Trudy Inst. zool. AN Kazakh. SSR 14:189-190 '60. (MIRA 13:12)

(Kustanay District--Tapeworms)
(Parasites--Swine)

PRYADKO, E.I.; TETERIN, V.I.; SHOL', V.A.

Helminth infestation of marals according to their age and the season of the year. Izv. AN Kazakh. SSR. Ser. biol. nauk 3 no.4: 57-64 Jl-Ag '65. (MIRA 18:11)

L 23972-66

ACC NR: AP6004831 (A) SOURCE CODE: UR/0404/65/000/004/0057/0064

AUTHOR: Pryadko, E. I.; Teterin, V. I.; Shol', V. A.

ORG: none

TITLE: Helminth infestation of reindeer by age and season

SOURCE: AN KazSSR. Izvestiya. Seriya biologicheskikh nauk, no. 4, 1965, 57-64

TOPIC TAGS: experiment animal, animal parasite, parasitology, veterinary medicine, preventive medicine

ABSTRACT: The dynamics of helminth infestation in maral and spotted deer was studied for more than a year in 2 deer sovkhozes in Kazakhstan. Infestation was investigated by taking 50 fecal samples from each age group for determination of eggs and larvae and by histologic study after dissection of 209 marals 1 month to 20 years of age and 10 spotted reindeer 1-13 year old. Eleven parasite genera were discovered, some represented by several species. The animals were found infested from 6-8 months of age and throughout life. Trichuris and Moniezia predominated to one year of age, Oesophagostomum, Ostertagiea and Elaphostrongylus predominated in one and 2-year olds, and Dicrocoelium predominated in adults. Cysticercus tenuicollis, Dictyocaulus, Bicaulus

UDC: 576.895.1

Card 1/2

L 23972-66

ACC NR: AP6004831 O

and Setaria were frequent from 2 years on, and Acanthospiculum was found normally after the first year. Seasonal variations occurred for all parasites except for Dicrocoelium and Cysticercus. Trichocephalus is the most dangerous helminth for all young animals, Oesophagostomum, Dictyocaulus and Elaphostrongylus are also dangerous for young marals, and Dictyocaulus, Bicaulus and Setaria are dangerous for adults. Prophylactic treatment is recommended when the animals are taken to enclosures (November) followed by a second treatment before pasture time (April), or during the winter. Oesophagostomum treatment is required only during pasture. To prevent infestation of young marals, early weaning is recommended to shorten their time in pasture with the mother and groups can be taken once a month to new pastures where no marals have fed for at least one summer season. Orig. art. has: 1 table.

SUB CODE: 06/ SUBM DATE: none/ ORIG REF: 004

Card 2/2 fv

SHOKANOV, N.; SHOLAKOV, Sh.

Some problems in ensiling feed in Kazakhstan. Vest. AN Kazakh.SSR 16 no.6:8-13 Je '60. (MIRA 13:7)
(Kazakhstan--Ensilage)

[illegible]GLASTER, L. B.

Pervye uroki geometrii v VI klasse. Posob. posobie dlia uchitelei [First geometry lessons in the [illegible] class; [illegible] manual for teachers]. Moskva, Uchpedgiz, 195[illegible]. 40 p. (M-vo prosveshcheniia RSFSR, Akad. ped. nauk RSFSR).

SO: Monthly List of Russian Accessions, Vol. [illegible], No [illegible], July 195[illegible].

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549820017-4"

POTOTSKIY, Mikhail Vladimirovich; MARGULIS, A.Ya., dots., retsenzent; SHOLASTER, N.N., dots., retsenzent; MAKAROV, I.P., dots., retsenzent; SHABASHOV, T.K., retsenzent (Noginsk); NIKITINA, N.I., red.

[What is being studied in a mathematical analysis course] Chto izuchaetsia v kurse matematicheskogo analiza. Moskva, Prosveshchenie, 1965. 86 p. (MIRA 18:8)

SHOLASTER, N.N. (Yelets).

Some problems of teaching trigonometry in secondary schools. (MLRA 7:3)
Mat.v shkole no.2:15-27 Mr-Ap '54.
(Trigonometry--Study and teaching)

SHOLASTER, N.N. (Kolomna)

Developing visual estimation and three-dimensional imagination of pupils in the 6th grade. Mat. v shkole no.5:35-38 S-O '60.
(MIRA 13:10)

(Geometry--Study and teaching)

SHOL'CHEV, V.; SARANTSEV, L.

Improving the Pronichev training apparatus. Kryl. rod. 11 no.12:16 D '60. (MIRA 14:3)
(Parachuting)

SOV/130-58-6-4/20

AUTHORS: Levin, L.Ya., Yakubtsiner, N.M., Sholeninov, V.M. and Grigor'yevykh, G.F.

TITLE: Use of Pyrite Cinders in the Production of High-basicity Fluxed Sinter (Primeneniye piritnykh ogarkov v proizvodstve oflyusovannogo aglomerata povyshennoy osnovnosti)

PERIODICAL: Metallurg, 1958, Nr 6, pp 5 - 10 (USSR).

ABSTRACT: A shortage of concentrates at the Cherepovets Metallurgical Works led to the use from the end of 1956 of pyrite cinder. Mentioning this, the authors go on to describe the development of sintering methods enabling a high proportion of this material to be used in the production of sinter with a basicity range of 1 - 1.2. The sinter plant at the works has three 75 m^2 machines and sinters a relatively high SiO_2 mix (Table 1). The pyrite cinders available from the Dorogomilovsk and Shchel'kovsk Works contain 0.3-0.4% Cu and 0.35-0.45% Zn, the sulphur content of both varying widely. Because of the paucity of published data and lack of experience in the USSR, on the sintering of pyrite cinders, experiments were first carried out on a 0.11 m^2 sinter box (Figure 2) with the participation of P.T. Krasavina, A.S. Bulatnikova and A.G. Zel'tser.

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Use of Pyrite Cinders in the Production of High-basicity Fluxed Sinter

Coke and limestone were 3-0 mm, cinders, concentrates and flue-dust were screened through a 5 mm screen and returns were 12-0 mm. The results showed (Figure 3) that with a mix containing 10-30% cinders accurate control of carbon (to 4.5 and 3.5-4.0% in the box and on the full scale, respectively), was obtained. A further series of tests were made with mixes containing 33% cinder showing sinter sulphur increasing with increasing CaO-content, but this effect could be minimized by raising the carbon content of the mix. Sintering speed increased as the basicity was raised to 0.8 but was unaffected by further increases. With increasing returns, from 25 to 35% sintering rate, permeability and sinter strength increased and sulphur decreased (Figure 5). Tests with 0-40% cinders in the ore part of the mix showed that a satisfactory sinter was obtained with 20-25% cinder without appreciable slowing of sintering. Bed depths of 200, 225, 250 and 275 mm were tested (Figure 7) with 25% cinders and a basicity of 1.2: maximal sulphur was obtained with the shallowest bed, the best de-sulphurization being obtained with intermediate bed depths. Sinter strength was highest with a bed depth of

Use of Pyrite Cinders in the Production of High-basicity Fluxed Sinter

225 mm, while sintering speed decreased when the depth exceeded 250 mm. The authors' conclusion is that 250 mm is the optimal bed depth. Results of full-scale experiments (Figure 8) at the Cherepovets Works on the whole confirmed the box experiments. The main conditions for maximal desulphurization during sintering were found to be: bed-depth 240-250 mm instead of 275, carbon content of the mix 4.5 - 4.8 instead of 3.5-4% (with 20-25% cinders); good permeability, secured by 30-35% returns and an artificial hearth layer. The lower iron content of the sinter with cinders was found to have no effect on the coke rate (700 kg/t pig) or the coefficient of utilisation of useful volume (0.73). There are 8 figures and 2 tables.

ASSOCIATION: Cherepovetskiy metallurgicheskiy zavod (Cherepovets Metallurgical Works) and Leningradskiy politekhnicheskiy institut (Leningrad Polytechnical Institute)

Card 3/3 1. Sintering furnaces - Equipment 2. Pyrites - Applications
3. Sintering furnaces - Operation

TREKALO, S.K.; YAKUBTSINER, N.M.; ANDRONOV, V.N.; GRIGOR'YEVYKH, G.F.; KAYLOV, V.D.; SHUR, A.B.; v rabote prinimali uchastiye: NEVMERZHITSKIY, Ye.V.; SHOLENINOV, V.M.; VITOVSKIY, V.M.; GRINBERG, D.L.; GUTMAN, E.Ye.; YEGOROV, N.D.

Open-hearth furnace operations with classified sinter. Stal' 20 no. 12:1063-1070 D '60. (MIRA 13:12)

1. TSentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii i Cherepovetskiy metallyrgicheskiy zavod.
(Blast furnaces) (Sintering)

BOGOPOL'SKIY, S.N.; GOLOUSHIN, N.S.; GRIGOR'YEVYKH, G.F.; LEVIN, L.Ya.; SMIRNOV, Yu.P.; TKACHEV, V.V.; CHISTYAKOV, V.I.; SHOLENINOV, V.M.; SHUR, A.B.; LOVETSKIY, L.V.

Partial replacement of coke breeze in the sinter charge by peat coke. Stal' 23 no.9:781-785 S '63. (MIRA 16:10)

TKACHEV, V.V., inzh.; SHOLEMINOV, V.M., inzh.; Prinimali uchastiye:
KONSTANTINOV, V.G.; LEVIN, L.Ya.; GRIGOR'YEVYKH, G.F.;
ZAKHAROV, V.N.; ZHDANOV, L.A.; PUZANOV, N.A.; SUKHANOV, [illegible];
VASIL'YEV, A.N.; ZHELEZNAYA, P.T.; TUGARINOVA, Ye.A.; LEVKIN,
A.S.; MOKIYEVSKIY, N.M.; SHAKHALOV, V.; SMIRNOV, A.I.

Developing the technology of producing a high-basicity
open-hearth sinter. Stal' 25 no.8:683-686 Ag '65.
(MIRA 18:8)

1. Cherepovetskiy metallurgicheskiy zavod (for Tkachev,
Sholeminov).

TOLMACHEV, A.I.; BOLOTOVA, V.M.; DEDOV, A.A.; LASHCHENKOVA, A.N.; SHOLENINOVA, T.P.; GARNOVSKIY, K.V., red. izd-va; VINOGRADOVA, N.F., tekhn. red.

[Classification key of higher plants of the Komi A.S.S.R.] Opredelitel' vysshikh rastenii Komi ASSR. Moskva, Izd-vo Akad. nauk SSSR, 1962. 356 p. (MIRA 15:7)
(Komi A.S.S.R.--Botany--Classification)

GOLOUSHIN, N.S., kand. tekhn. nauk; CHISTYAKOV, V.I.; KULIKOV, V.P.; KISINA, A.M.; LOVETSKIY, L.V.; SMIRNOV, Yu.P.; SHOLENINOV, V.M.

Use of peat semicoke and coke in metallurgy. Trudy VNIITP no.18:238-246 '61. (MIRA 17:1)

1. Leningradskiy politekhnicheskiy institut im. Kalinina (for all except Sholeninov. 2. Cherepovetskiy metallurgicheskiy zavod (for Sholeninov).

YAKUBTSINER, N.M.; SMIRNOV, Yu.P.; SHOLENINOV, V.M.

Optimum coarseness of the components of a sintering charge during the sintering of fine-grained concentrates. Trudy LPI no.225: 168-177 '64. (MIRA 17:9)

SHOLGINA, V., arkh.

Acoustics in concert halls. Nauka i tekh mladezh 14 no.5:8-10 My '62.

MANZHELEY, M.Ye.; SHOLIN, A.F.

Electrochemical hydrogenation of allyl alcohol. Dokl. AN SSSR 141 no.4:897-899 D '61. (MIRA 14:11)

1. Kishinevskiy gosudarstvennyy universitet. Predstavleno akademikom A.A. Balandinym.
(Allyl alcohol) (Hydrogenation)
(Electrochemistry)

L 12729-63 EWP(q)/EWT(m)/BDS AFFTC/ASD RM/JD
ACCESSION NR: AP3002286 S/0062/63/000/006/1031/1035

58
57

AUTHOR: Patrikeyev, V. V.; Sholin, A. F.; Nikiforova, I. A.

TITLE: Specific formulation of silica gels and the method of separation of complex organic mixtures

27

SOURCE: AN SSSR. Izv. Otdeleniye khimicheskikh nauk, no. 6, 1963, 1031-1035

TOPIC TAGS: specific silica gel preparation, methylestosteron separation from ehtylestosteron

ABSTRACT: The method of preparation of specific silica gels by means of introducing formulating material into the gel shows possibilities of preparation of such adsorbents, including adsorbents for the substances insoluble in water solutions. The specificity of these gels was proved by the fact that they separate not only the different compounds from each other, but also their isomers. A general method for separating the previously inseparable substances from the complex mixtures by means of preparation of specific silica gels directly from the existing industrial silica gels has been presented. A method is found for the separation of complex alkaloid mixtures from the groups of substituted hormones. Orig. art. has: 1 table.

Association: Inst. of Organic Chemistry, Academy of Sciences, SSSR

Card 1/2

MANZHELEY, M.Ye. (Kishinev); SHOLIN, A.F. (Kishinev)

Electrolytic reduction of unsaturated compounds on the platinized platinum cathode. Part 2: Electrolytic reduction of allyl alcohol. Zhur.fiz.khim. 37 no.8:1825-1831 Ag '63. (MIRA 16:9)

1. Kishinevskiy gosudarstvennyy universitet.
(Allyl alcohol) (Reduction, Electrolytic)
(Electrodes, Platinum)

BALANDIN, A.A.; SLOVOKHOTOVA, T.A.; SHOLIN, A.F.; UGOL'TSEVA, L.A.

Hydrogenolysis of ethane in a flow system on nickel catalysts. (MIRA 18:6)
Kin. i kat. 6 no.1:115-120 Ja-F '65.

1. Moskovskiy gosudarstvennyy universitet.

SLOVOKHOTOVA, T.A.; BALANDIN, A.A.; PETROV, E.S.; SHOLIN, A.F.

Catalytic hydrogenolysis of ethane and cyclohexane on Ni-Kieselguhr catalysts. Izv. AN SSSR. Ser. khim. no.5:785-792 '65. (MIRA 18:5)

1. Moskvoskiy gosudarstvennyy universitet im. Lomonosova.

L 1357-66

ACCESSION NR: AP5024365 UR/0286/65/000/015/0033/0033
534.321.9:543.41

24
B

AUTHOR: Patrikeyev, V. V.; Sholin, A. F.

TITLE: A method for visual observation of ultrasonic fields. Class 12, No. 173239

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 15, 1965, 33

TOPIC TAGS: ultrasonic field, ultrasonic radiation

ABSTRACT: This Author's Certificate introduces a method for visual observation of ultrasonic fields with subsequent analysis by the shadow method. To fix and preserve the patterns of complex ultrasonic fields, a quick-setting gel is exposed on which a surface relief is formed which can be observed not only during the ultrasonic exposure, but after its conclusion.

ASSOCIATION: none
SUBMITTED: 16May61 ENCL: 00 SUB CODE: GP
NO REF SOV: 000 OTHER: 000

Card 1/1

L 31829-65 EWT(d)/EWT(l)/EEC(k)-2/EEC-4/EPA(w)-2/EEC(t)/T/EWA(m)-2/EPA(sp)-2 Pg-4/
Pi-4/Pk-4/Pl-4/Po-4/Pq-4/Pz-6/Pab-10 IJP(c) AT

ACCESSION NR: AP5004373 S/0056/65/048/001/0061/0064

AUTHOR: Blinov, P. I.; Zagorodnikov, S. P.; Smolkin, G. Ye.; Sholin, G. V.

TITLE: Measurement of the density of a plasma decaying in a magnetic field with the aid of microwave and Fabry-Perot interferometers

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 48, no. 1, 1965, 61-64

TOPIC TAGS: plasma decay, plasma electron density, Fabry Perot interferometer, microwave interferometer

ABSTRACT: This work was performed in connection with an investigation of shock waves in a rarefied plasma, described by the authors previously (ZhETF, v. 47, 1717, 1964). The electron density decrease was measured with microwave interferometers at wavelengths 8 and 4 mm. A microwave bridge circuit was used, in which one beam passed through the investigated plasma in an attenuator, and the other beam (in the reference channel) passed through an attenuator and a phase shifter. The voltage oscillations at the detector output of such a circuit are in the final analysis a function of the plasma density in the measuring channel. Each inter-

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ACCESSION NR: AP5004373 4

ferometer was used to obtain approximately 10 experimental points on the density fall-off curve in the corresponding range of electron concentrations. The two interferometers gave nearly identical results in the band in which their readings overlapped ($5 \times 10^{12} - 10^{13}$ cm^{-3}). The results are plotted in Fig. 1 of the Enclosure. In view of the difficulty of using microwave methods at densities above 4×10^{13} cm^{-3}, the plasma density was measured by determining the Stark effect of the hydrogen Balmer lines. The Stark widths were measured with a Fabry-Perot interferometer crossed with an ISP-51 spectrograph. The time variation of the spectral line width was measured using a fast time-resolved sweep of the spectrum with an electron-optical converter. The time decay curves obtained by the two types of interferometers go over smoothly into each other. "The authors thank Ye. K. Zavoyskiy for a discussion and interest in the work and M. M. Butslov for providing the electron-optical converter." Orig. art. has: 2 figures. [02]

ASSOCIATION: none

SUBMITTED: 16Jun64 ENCL: 01 SUB CODE: EM

NO REF SOV: 005 OTHER: 001 ATD PRESS: 3199

Card 2/3

L 31829-65

ACCESSION NR: AP5004373

ENCLOSURE: 01

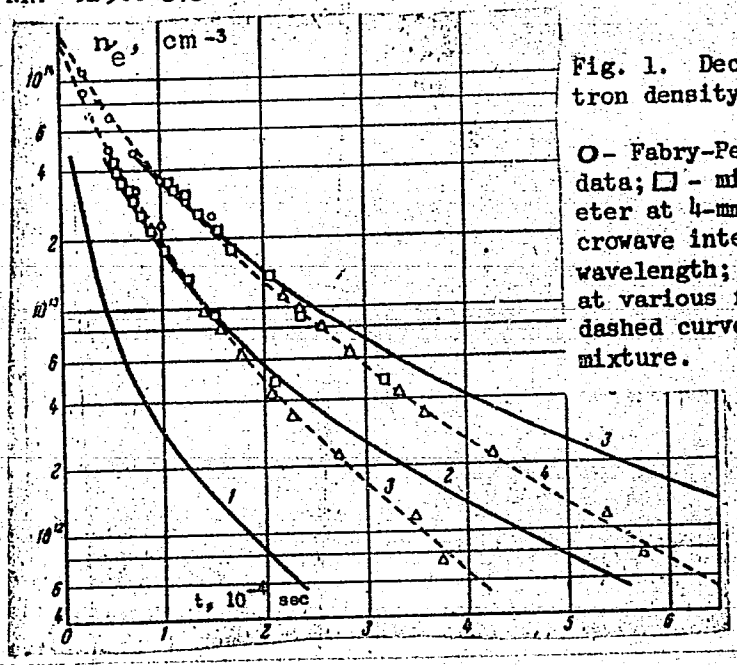

Fig. 1. Decrease in plasma electron density

O - Fabry-Perot interferometer data; □ - microwave interferometer at 4-mm wavelength; △ - microwave interferometer at 8-mm wavelength; solid curves - helium at various field intensities; dashed curves - helium-hydrogen mixture.

Card 3/3

42705
S/020/62/147/002/011/021
B164/B102

AUTHORS: Kudrin, L. P., Sholin, G.V.

TITLE: The asymmetry of the hydrogen spectral lines in plasma

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 147, no. 2, 1962, 342-345

TEXT: The asymmetries of the contours of the H_β and H_δ lines observed in hydrogen plasma when the density of the charged particles is $N \geq 10^{16}$ cm^{-3} are a function of density. They manifest themselves in the intensity being shifted toward the short-wave region, in a shift of the intensity maximum relatively to the line center, and in a variation of the interval between the maxima. Hence the density of the charged particles can be determined by comparing the contours found experimentally with the values calculated from a theory which explains these asymmetries. The author makes detailed calculations for the hydrogen atom allowing for the electrostatic field of the neighboring ion. Besides the dipole term which is obtained from the symmetric splitting of the lines by the linear

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Stark effect, the quadrupole contribution to the interaction energy between the atom and the ion is duly considered. The wave functions of the Schroedinger equation in parabolic coordinates are given for this case in first approximation. They lead to general expressions for the energy splitting, intensity and probability for the position of the Stark components. The numerical values for some transitions are given in a table. For the H_β line, the theoretical and experimental values obtained for the intensity variation in the maximum and for the shift of the maximum relative to the line center agree fairly well for $N = 10^{16} - 10^{18} cm^{-3}$. Whilst the calculated distances apart of the maxima as a function of N agree with experiments, it is unlikely that useful values could be obtained for the line width, owing to the rough assumptions that have to be made for the electric field of the ions, and since the line broadening due to electron impact is neglected. In order to improve the theory here presented, which includes no statement on the line center, the influence of the electrons should be considered. There are 2 tables.

PRESENTED: June 14, 1962, by M. A. Leontovich

Card 2/3

The asymmetry of the hydrogen ... S/020/62/147/002/011/021
B164/B102

SUBMITTED: June 5, 1962

Card 3/3

SHOLIN, G. V., KUDRIN, A. P.,

"New Methods of Plasma Diagnostics from Spectroscopic Data,"

report presented at the 6th Intl. Conf. on Ionization Phenomena in Gases, Paris, France 8-13 Jul 63

L 9845-63 EWT(1)/EWG(k)/BDS/ES(w)-2--AFFTC/ASD/ESD-3/AFWL/SSD--Pz-4/
Po-4/Pi-4/Pab-4--IJP(C)
ACCESSION NR: AP3000577 S/0051/63/014/005/0607/0611

76

AUTHOR: Kudrin, L. P.; Sholin, G. V.

TITLE: Shift of He II spectrum lines in dense plasma 21

SOURCE: Optika i spektroskopiya, v. 14, no. 5, 1963, 607-611

TOPIC TAGS: plasma, plasma densities, spectral lines, He II, H

ABSTRACT: Usually plasma densities are determined from the width of selected spectral lines. A new method for measuring plasma densities was proposed by the authors (Doklady AN SSSR, 147, 352, 1962). This method is based on the noticeable asymmetry of some hydrogen lines in dense plasma, connected with inhomogeneity of the electric field acting on the atoms. The asymmetry is due to quadrupole interaction of the plasma electrons with the emitting atoms. The same thing is true of He II and other one-electron bound states in plasma. Another possible way of determining plasma density is provided by the shift of spectrum lines. Blue shift of the 46866 Angstrom line of He II was discovered by Berg, Ali, Linke, and Greim (Phys. Rev., 125, 199, 1962). This shift can be explained with the aid

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ACCESSION NR: AP3000577

of the electron impact theory proposed by Baranger (Phys. Rev., 111, 481, 1958). The authors' calculations, based on the assumption that the location of the line peak is determined mainly by the central Stark component and employing some of Baranger's equations, lead to line shift values as a function of the plasma density in good agreement with the experimental results of Berg et al, thereby substantiating Baranger's impact theory. Nevertheless, the authors feel that determination of plasma densities from the asymmetry of hydrogen lines should be more reliable. Orig. art. has: 8 equations and 2 tables.

ASSOCIATION: none

SUBMITTED: 17Jul62 DATE ACQ: 12Jun63 ENCL: 00

SUB CODE: PH NR REF SOV: 002 OTHER: 005

ja/nh

Card 2/2

ACCESSION NR: AP4009105 S/0056/63/045/006/1850/1857

AUTHOR: Zagorodnikov, S. P.; Smolkin, G. Ye.; Sholin, G. V.

TITLE: Spectroscopic investigation of a turbulently heated plasma

SOURCE: Zhurnal eksper. i teoret. fiziki, v. 45, no. 6, 1963, 1850-1857

TOPIC TAGS: plasma heating, plasma turbulence heating, high density plasma, high temperature plasma, plasma spectrum, plasma spectroscopic investigation, wave penetration, electron heating rate, electron temperature, electron temperature distribution, emission line intensity, impurity effect

ABSTRACT: A spectroscopic investigation is reported of turbulence heating of a helium plasma with a relatively high electron density, for the purpose of using turbulence heating to obtain and investigate high-temperature plasmas. An image converter was used to obtain a time-resolved spectrum of the heated plasma, so as to trace the dynamic behavior of the spectral lines in each phase of a single

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ACCESSION NR: AP4009105

discharge. Tests were made to determine the penetration of the wave into the plasma, the electron heating rate, and the radial distribution of the electron temperature in the discharge tube. All these characteristics were determined from the radial distribution of the emission intensity of the individual spectral lines. An estimated $T_e \approx 100$ eV was obtained for the electron temperature in a plasma of density $n_e = 2 \times 10^{13}$ cm^{-3}. The impurity content, which plays an important role in the heat balance of a plasma with hot electrons, was found not to exceed 1 per cent of the primary component under typical experimental conditions. "In conclusion, we thank Ye. K. Zavoyskiy under whose initiative and constant attention the work was performed. We are also grateful to L. I. Rudakov for continuous interest in the work and useful discussions, M. V. Babykin for help in constructing the experimental apparatus, and P. I. Blinov for help with the microwave measurements." Orig. art. has: 6 figures and 1 formula.

Card 2/42

ACCESSION NR: AP4019216 S/0056/64/046/002/0511/0530

AUTHORS: Babykin, M. V.; Gavrin, P. P.; Zavoyskiy, Ye. K.; Rudakov, L. I.; Skoryupin, V. A.; Sholin, G. V.

TITLE: Net results on the turbulent heating of plasma

SOURCE: Zhurnal eksper. i teor. fiz., v. 46, no. 2, 1964, 511-530

TOPIC TAGS: plasma, plasma heating, turbulent plasma, heating, plasma electron heating, plasma ion heating, collisionless plasma heating, plasma confinement, plasma confinement time, electron confinement time, ion confinement time

ABSTRACT: This is a continuation of earlier work by the same authors on turbulent plasma heating in a rapidly alternating magnetic field ("Yaderny*y sintez, Appendix III, 1962; ZhETF, v. 43, pp. 411, 1547, and 1976, 1962). The present paper reports the results of experiments with a net setup, the parameters of which have made possible (1) rapid collisionless heating of the plasma electrons to 1.5 keV by a strong hydrodynamic wave propagating in the plasma transversely

Card 1/[illegible]

ACCESSION NR: AP4019216

through the magnetic field; (2) investigations of the confinement of a plasma in a magnetic trap; (3) observations of the collisionless heating of ions, which accompanies the turbulent heating of the electrons under certain conditions. The electron temperature was determined from the absorption of the electron bremsstrahlung in thin carbon films, from the ratio of the rates of decay of various spectral lines, and from readings of a probe. The plasma concentration was determined by optical means. The noise produced in the plasma was due to ion cyclotron oscillations and to magnetic sound resonance. A plasma electron pressure of 10^{15} eV/cm^3 (approximately 20% of the alternating magnetic field pressure) was obtained in the concentration range from 10^{12} to 10^{13}/cm^3. Confinement times were ~130 μsec for ~100-eV ions and ~60 μsec for 500-eV electrons. No strong instabilities were observed during the time of plasma confinement in the trap. Ion cyclotron waves and natural oscillations of the plasma column were

Card 2/4 3

ACCESSION NR: AP4019216

observed. A theoretical mechanism is proposed for this electron heating and is found to agree qualitatively with experimental results. Orig. art. has: 17 figures and 10 formulas.

ASSOCIATION: None

SUBMITTED: 13Aug63 DATE ACQ: 27Mar64 ENCL: 01

SUB CODE: PH NO REF SOV: 008 OTHER: 002

Card 3/4

L 16108-65 EWT(l)/EWP(m)/EWG(k)/EPA(sp)-2/EPA(w)-2/EEC(t)/T/EEC(b)-2/FCS(k)/EWA(m)-2/EWA(h) Pz-6/Po-4/Pd-1/Pab-10/Pi-4 ESD(t)/AFDC(a)/SSD(b)/ASD(a)-5/AS(mp)-2/ASD(p)-3/AFETR/RAEM(a)/IJP(c) AT

ACCESSION NR: AP5000319 S/0056/64/047/005/1717/1720

AUTHORS: Zagorodnikov, S. P.; Rudakov, L. I.; Smolkin, G. Ye.; Sholin, G. V. B

TITLE: Observation of shock waves in a collision-free plasma

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 47, no. 5, 1964, 1717-1720

TOPIC TAGS: plasma electromagnetic wave, shock front propagation, discharge plasma, electron temperature, compression shock wave

ABSTRACT: The purpose of the investigation was to clarify the character of propagation of a strong electromagnetic wave in a rarefied plasma, to study the possibility of existence of shock waves in such a plasma, and to investigate the energy-dissipation mechanism that leads to the heating of the electrons in the plasma. The experiments were made under conditions analogous to those used in

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L 16108-65

ACCESSION NR: AP5000319

earlier studies of turbulent heating. The experimental setup was similar to that described by the authors elsewhere (ZhETF v. 45, 1850, 1963), except that a larger discharge chamber (6 cm in diameter) was used, and the high frequency resonant circuit was an artificial line which produced a trapezoidal magnetic pulse in the discharge chamber. The plasma density ranged from $\sim 10^{11}$ to $\sim 10^{14}$ cm^{-3}. Many of the procedures were the same as in the earlier study. A compression shock wave was observed, traveling from the periphery towards the axis of the discharge tube with a velocity close to Alfven velocity. The shock wave had a sharply delineated front in which an intense dissipative process is developed with a jump in the electron temperature from ~0.1 eV ahead of the front to several hundred eV behind the front. The time width of the front did not exceed (3--4) x 10^{-8} sec. At least a 2.5-fold increase in the steepness of the compression wave was observed, with a minimum time width ~2 x 10^{-8} sec. The propagation of a rarefaction wave in the collision-free plasma was not accompanied by for-

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L 16108-65

ACCESSION NR: AP5000319

mation of a shock wave, and in this case the wave front is compressed. "The author thanks Ye. K. Zavoyskiy for interest in the work and for useful discussions." Orig. art. has: 2 figures.

ASSOCIATION: None

SUBMITTED: 16Jun64 ENCL: 00

SUB CODE: ME NR REF SOV: 004 OTHER: 000

Card 3/3

[redacted], ...; [redacted], L.I.; [redacted], G.Ye.; [redacted], G.V.

Observation of shock waves in a collision-free plasma. Zhur. eksp. i teor. fiz. 47 no.5:1717-1720 N '64.

(MIRA 18:2)

[redacted], I.M.; [redacted] I.D., G.V.

Measurement of electron temperature on the basis of helium line intensities. Dokl. AN SSSR 160 no.3:575-577 Ja '65.
(MIRA 18:3)

1. Submitted August 21, 1964.

L 40744-65 EWT(m)/EPF(c)/EWP(t)/EWP(b) Pr-4 IJP(c) JD
ACCESSION NR: AP5005885 S/0020/65/160/003/0575/0577

35
B

AUTHORS: Podgornyy, I. M.; Sholin, G. V.

TITLE: Concerning the measurement of the electronic temperature from the ratio of the helium line intensities

SOURCE: AN SSSR. Doklady, v. 160, no. 3, 1965, 575-577

TOPIC TAGS: plasma temperature, electron temperature, helium line, line intensity, temperature measurement

ABSTRACT: It is shown that the determination of the electron temperature from the ratio of the intensities of certain helium lines (2^1P--4^1D 4922 Å and 2^3P--4^3S 4713 Å) may sometimes give incorrect results. In particular, there exist processes which limit the possibility of the use of this method when the plasma concentration rises above a certain critical value, for then the populations of the

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L 40744-65
ACCESSION NR: AP5005885 0

4^1D and 4^3S levels are determined not only by excitation from the ground state and by spontaneous emission, but also by transitions, due to electron collisions, between states within a given principal quantum number. The conditions when the contribution of the collision transitions become appreciable are determined. A value of 10^{12} cm^{-3} is obtained for the critical electron density in the plasma. At this density and for an electronic plasma temperature of 5 eV the temperature determined from the ratio of the intensities of the 4713 and 4922 Å lines may be overestimated by a factor of 2. The method is therefore applicable only at concentrations smaller than 3×10^{11} cm^{-3}. Formulas are derived for the relative probabilities of the collision transitions. Conditions under which the error is minimized are briefly discussed. This report was presented by Ye. K. Zavoyskiy. Orig. art. has: 4 formulas.

ASSOCIATION: None

Card 2/3

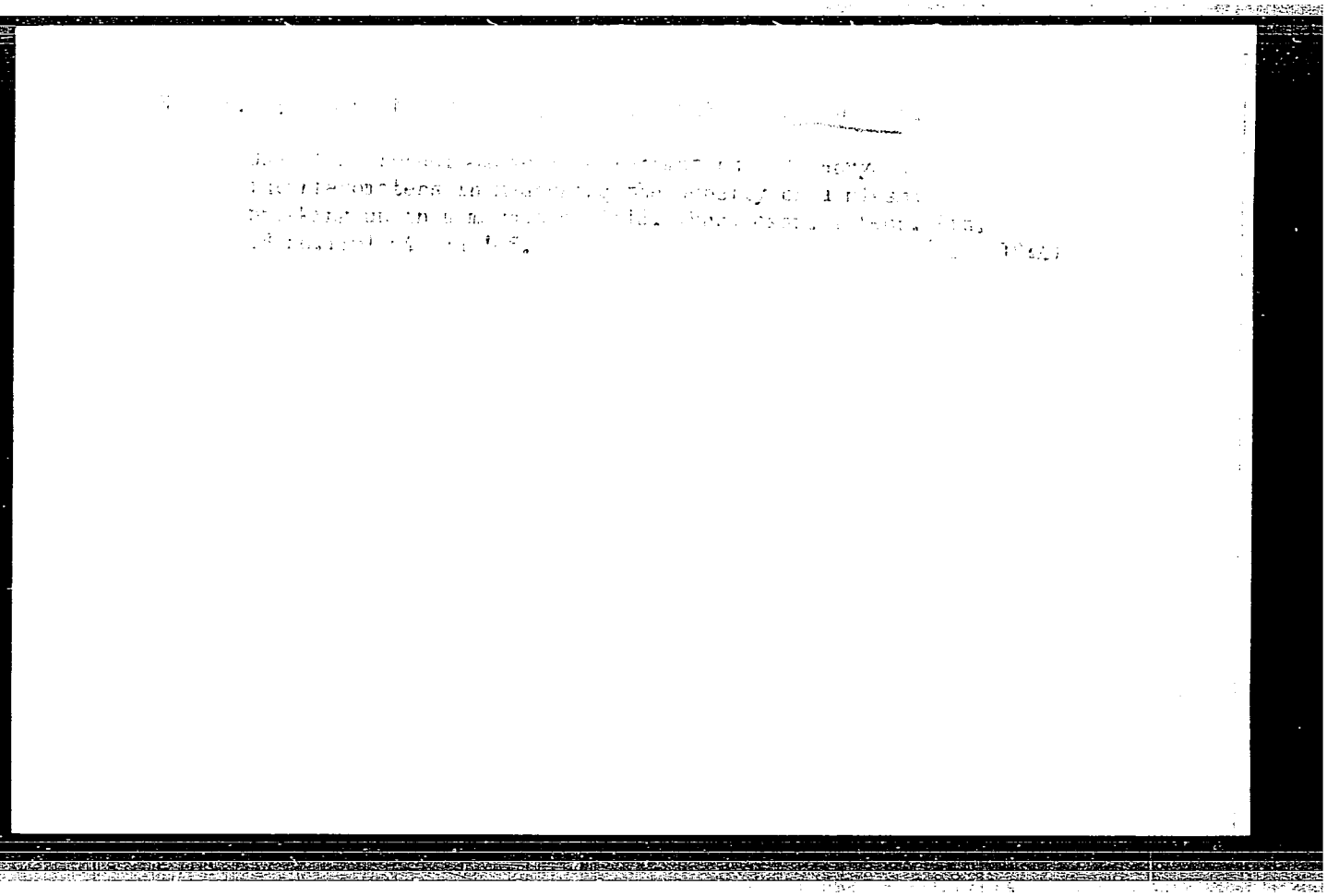
L 40744-65
ACCESSION NR: AP5005885

0

SUBMITTED: 08Jul64 ENCL: 00 SUB CODE: OP, GP

NR REF SOV: 001 OTHER: 007

Card 3/3



L 9228-66 EWT(l)/EWT(m)/ETC/EPF(n)-2/EWG(m)/EWP(t)/EWP(b)/ETC(m) IJP(c).

ACC NR: AP5026103 JD/WW/AT SOURCE CODE: UR/0386/65/002/005/0238/0241

AUTHOR: Zagorodnikov, S. P.; Rudakov, L. I.; Smolkin, G. Ye.; Sholin, G. V.

ORG: none

TITLE: Investigation of the structure of the front of a strong magnetic-sound wave in a rarefied plasma

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu. Prilozheniye, v. 2, no. 5, 1965, 238-241, and insert, side A, between p. 238 and 239

TOPIC TAGS: plasma wave propagation, rarefied plasma, helium plasma, magnetohydrodynamics, sound wave

ABSTRACT: The article is devoted to an experimental investigation of the structure of the front of a strong magnetic-sound wave propagating in a rarefied plasma transverse to a magnetic field. The experiments were carried out under the conditions described in an earlier paper by the authors (ZhETF v. 47, 1717, 1964). The wave was excited by a trapezoidal pulsed magnetic field H, produced on the boundary of a cylindrical plasma column (diameter 6 cm and length 30 cm) in a constant magnetic field H_0. The pulse growth time was $\tau_0 \approx 5.5 \times 10^{-8}$ sec. The plasma density n_0, ahead of the wave front ranged from $\sim 0.5 \times 10^{12}$ to $\sim 6 \times 10^{13}$ cm^{-3}. The magnetic Mach number μ varied in the range ~1.3--4.2. The following results were obtained. Nonlinear twisting of the wave front in the plasma was observed for all the indicated values of μ. The profile of the magnetic field in the plasma was in good agreement

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L 9228-66

ACC NR: AP5026103

with the profile calculated by J. H. Adlam and J. E. Allen (Pros. Phys. Soc. (London) v. 75, 640, 1960) within the accuracy of the cylindrical effect. The width of the transition region coincides, with ~50% accuracy (taking nonstationarity into account), with the width calculated by Adlam and Allen. Oscillograms of the magnetic-probe signals show that the front of the magnetic field, which increases linearly on the plasma boundary, changes inside the plasma into an exponentially growing front with a gradually increasing slope. The absorption of the wave energy on the front increases with increasing n_0. At the same time, electrons with energy larger than 50 ev appeared behind the wave front. The energy transfer from the wave to the plasma electrons is attributed either to instability or ionization collisions of the electrons on the wave front. Authors are grateful to Ye. K. Zavoyskiy for interest in the work and to A. A. Vedenov and Ye. P. Velikhov for valuable discussions. Orig. art. has: 3 figures and 2 formulas.

SUB CODE: 20/ SUBM DATE: 17Jul65/ ORIG REF: 003/ OTH REF: 007

Card 2/2

L 25676-66 EWT(1)/ETC(f)/EPF(n)-2/EWG(m)/ETC(m)-6 IJP(c) WW/AT

ACC NR: AT6001559 SOURCE CODE: UR/3136/65/000/909/0001/0008

AUTHOR: Zagorodnikov, S. P.; Rudakov, L. I.; Smolkin, G. Ye; Sholin, G. V. 83 80 B+/

ORG: none

TITLE: Investigation of the structure of a strong magnetosound wave front in rarefied plasma 2/

SOURCE: Moscow. Institut atomnoy energii. Doklady, IAE-909, 1965. Issledovaniye struktury fronta sil'noy magnitno-zvukovoy volny v razrezhennoy plazme, 1-8

TOPIC TAGS: plasma magnetic field, sound wave, magnetic field, rarefied plasma, constant magnetic field, plasma wave

ABSTRACT: This is a continuation of previous experiments reported by the authors in ref. 4 (ZhETF, 47, 1717, 1964). The experiments were inspired by the work of J. H. Adlam and J. E. Allen (Proc. Phys. Soc. London, 75, 640, 1960), where a numerical solution was found for the problem of the unsteady motion of a magnetic piston along rarefied plasma, based on two concrete formulas on the change of the magnetic field in time at the boundary of plasma:

$$H_n(t_n) = 1 + \alpha t_n \qquad (1)$$

and

$$H_n(t_n) = 1 + \beta\left[1 - \exp(-\alpha t_n)\right] \qquad (2)$$

Card 1/2

L 25676-66

ACC NR: AT6001559

3

The profile of the magnetic field of plasma was found for certain values of t_n, when $\alpha = 1$ and $\beta = 1$. The experiments were conducted under conditions similar to those reported by the authors in ref. 4. The wave was excited by a trapezoidal impulse of the magnetic field π, developed at the boundary of a cylindrical plasma column with a diameter of 6 cm and length of 30 cm, within the constant magnetic field H_0. The period of the impulse was $\tau_0 = 5.5 \times 10^{-8}$ sec. The plasma density n_0 preceding the wave front varied between $\sim 0.5 \times 10^{12}$ and $\sim 6 \times 10^{13}$ cm^{-3}. The magnetic Mach number μ varied between 1.3 and 4.2. For all values of μ there was observed a process of nonlinear rotation in the plasma as compared with the front given in formulas (1) or (2). No abnormal growth in the width of the front was observed in the $2 < \mu < 4.2$ region. This is apparently related to the unstabilized character of the wave front in these experiments. All other results coincide with the findings of Adlam and Allen. In conclusion, the authors note that they have observed during their experiments an absorption of wave energy at the front, which grew with the increase of n_0. In the plasma behind the wave front, electrons with an energy of 50 ev appeared. The authors thank E. K. Zavoyskiy for his interest in the experiments and A. A. Vedenov and E. P. Velikhov for their valuable discussions. Orig. art. has: 2 formulas and 3 figures.

SUB CODE: 20 / SUBM DATE: 00/ ORIG REF: 002/ OTH REF: 008

Card 2/2 dda

[illegible], A.A.: Sbornik, V. VE.

Measuring instruments

Errors in measuring and limits of practical use of the lectrodynamic profile measuring instrument KV-4. Stan. i instr., no. 12, 1951.

Monthly List of Russian Accessions, Library of Congress, March 1952, UNCLASSIFIED

ACCESSION NR: AP3000120 S/0062/63/000/005/0789/0793

AUTHOR: Sholina, S. I.; Bogolyubskiy, V. A.; Kruglyakova, K. Ye.

TITLE: Antioxidative effectiveness of some hydroquinone derivatives

SOURCE: AN SSSR. Izvestiya. Otdeleniye khimicheskikh nauk, no. 5, 1963, 789—793

TOPIC TAGS: antioxidants, hydroquinone derivatives, Mannich reaction

ABSTRACT: The authors describe the synthesis of the following compounds by aminomethylation using the Mannich reaction: (1) 2,5-bis-(dimethylaminomethyl) hydroquinone; (2) 2,3-bis-(dimethylaminomethyl)-5-isopropylhydroquinone; (3) 2,5-bis-(diethylaminomethyl)hydroquinone; and (4) 2-diethylaminomethyl-4-methoxyphenol. Compounds (1)-(3) proved to be more effective antioxidants than hydroquinone and propylgallate when tested under standard conditions with methyl oleate at 90C and an O sub 2 pressure of 300 mg Hg for 20 minutes. Substitution of mixed alkyl and aminomethyl groups (compound 1) increased the antioxidative effectiveness to 5 times that of hydroquinone. Substitution of a secondary aminomethyl group in the O-position in the monoethyl ether of hydroquinone (compound 4) had no effect on the antioxidative properties. "The authors express their gratitude to N. M. Emanuel' for his continued interest in their work." Orig. art. has: 2 figures, 1 formula, and 1 table.

Card 1/2

ACCESSION NR: AP3000120

ASSOCIATION: Institut khimicheskoy fiziki Akademii nauk SSSR (Institute of Chemical Physics, Academy of Sciences SSSR)

SUBMITTED: 22Jun62 DATE ACQ: 12 Jun63 ENCL: 00

SUB CODE: CH NO REF SOV: 003 OTHER: 004

Card 2/2

ACCESSION NR: AP3000127 S/0062/63/000/005/0890/0893

AUTHOR: Smirnov, L. D.; Sholina, S. I.; Kruglyakova, K. Ye.; Dyumayev, K. M.

TITLE: Space restricted 3-oxypyridines. Report 2. Synthesis and the study of the antioxidizing properties of some 2,6-dialkyl-3-oxypyridines and 2,6-dialkyl-4-(dialkylamino)methyl-3-oxypyridines

SOURCE: AN SSSR. Izvestiya. Otdeleniye khimicheskikh nauk, no. 5, 1963, 890-893

TOPIC TAGS: synthesis of 2-alkyl-3-oxy-6-methylpyridines, antioxidants, 2-ethyl-6-methyl-3-oxypyridine

ABSTRACT: The present work is devoted to the synthesis and study of the properties of antioxidants 2,6-dialkyl-3-oxypyridines and 2,6-dialkyl-4-(dialkylamino)methyl-3-oxypyridines, whose structures are closely related to vitamin B6. The synthesis of a number of 2-alkyl-3-oxy-6-methylpyridines by reaction of 2-acyl-5-methylfurans with ammonia has been realized. The antioxidative effect of some 2,6-dialkyl-4-dialkylaminomethyl-3-oxypyridines has been studied in the oxidation reaction of methyloleate. The most effective antioxidant was found to be 2-ethyl-6-methyl-3-oxypyridine. The introduction of dimethylaminomethyl, methylpiperidine and methylmorpholine groups into the 4th position of 2,6-dialkyl-3-oxypyridines practically

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ACCESSION NR: AP3000127

eliminates the antioxidative properties of these materials. "The authors express their gratitude to N. M. Emanuel' for his continued interest in this work." Orig. art. has: 1 table, 1 graph, and 1 equation.

ASSOCIATION: Institut khimicheskoy fiziki Akademii nauk SSSR (Institute of Chemical Physics, Academy of Sciences SSSR)

SUBMITTED: 29Jun62 DATE ACQ: 12Jun63 ENCL: 00

SUB CODE: CH NO REF SOV: 002 OTHER: 010

Card 2/2

SHOLKIN, K.D.; LENOK, L.N.

Blagodatsk deposit. Trudy IGEM no.83:369-372 '63.

Deposits of the Gorno-Zerentuy zone. 392-404
(MIRA 16:11)

KLIMENKO, V.G.; SHOLKOVSKAYA, B.I.

Proteins and nonprotein nitrogen in the grain and green bulk of chick-peas. Trudy po khim. prirod. soed. no.3:159-167 '60.
(MIRA 16:2)

1. Kishinevskiy gosudarstvennyy universitet. Laboratoriya khimii belka.
(Chick-pea) (Plants--Chemical analysis) (Nitrogen)

SOV/3-58-11-35/38

AUTHORS: Firsov, L.V., Candidate of Geological-Mineralogical Sciences; Kartashov, I.P., Candidate of Geographical Sciences; Panov, A.A.; Rabil', K.M.; Sholmin, V.Ya.; Strizhenko, N.D.

TITLE: An Aid Required by Both Students and Production Workers (Posobiye, neobkhodimoye i studentam i proizvodstvennikam)

PERIODICAL: Vestnik vysshey shkoly, 1958, Nr 11, pp 92 - 94 (USSR)

ABSTRACT: This is a review of the book by Professor N.I. Buyalov, "Structural Geology". There is 1 Soviet reference.

ASSOCIATION: Sovet narodnogo khozyaystva Magadanskogo administrativnogo ekonomicheskogo rayona (National Economy Council of the Magadan Administrative Economic District)

Card 1/1

FIRSOV, L.; KARTASHOV, I.; PANOV, A.; RABIL', K.; SHOLMIN, V.; STRIZHENKO, N.

"Structural geology" by N.I. Buialov. Reviewed by L. Firsov and others. Geol. nefti i gaza 3 no. 3:70-71 Mr '59. (MIRA 12:4)
(Geology, Structural)

SHOLMIN, V.Ya.

Prospects for uncovering new placers in the Ten'kinskiy District. Kolyma 21 no.1:34-36 Ja '59. (MIRA 12:6)

1.Gornoye upravleniye, Magadanskaya oblast'.
(Magadan Province--Gold mines and mining)

L 16914-65 EWG(j)/EWT(m)/EPF(c)/EPR/EWP(j)/EWP(t)/EWP(b) Pc-4/Pr-4/Pad/Ps-4
IJP(c) JD/HW/JG/RM

ACCESSION NR: AP4047836 S/0195/64/005/005/0842/0848

AUTHOR: Bata, I.; Shol'moshi, F.; Sabo, Z. G. (H)

TITLE: The effect of the formation of spinels on the catalytic and electrical properties of a nickel oxide - chromium oxide system

SOURCE: Kinetika i kataliz, v. 5, no. 5, 1964, 842-848

TOPIC TAGS: nickel oxide, chromium oxide, spinel formation, catalytic activity, electrical conductivity, formic acid breakdown

ABSTRACT: After discussing a previous study of a magnesium oxide - chromium oxide system in connection with the problem of the transient phases which arise during spinel formation, the authors point out that in their investigation of the catalytic activity of this system on the basis of the model reaction of formic acid decomposition, they were unable to detect any particularly active state preceding the formation of the spinel. Optimal electrical conductivity was observed at the beginning of the spinel formation process as a consequence of the large quantity of defects which develop at that time. In the present article, data were obtained regarding the catalytic activity of a system of nickel and chromium oxides at various stages of a heat treatment process. Since the technical literature con-

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L 16914-65

ACCESSION NR: AP4047836

tains but little information on the properties of this system and on the process of spinel formation, the authors also studied the characteristic peculiarities of the reaction of nickel and chromium oxides in the solid phase. An investigation was made of the magnetic, electrical and catalytic properties of a mixture of nickel and chromium oxides, heated at different temperatures, in the air and after treatment with formic acid. The measurement of initial speed rates revealed no particularly active state for the decomposition of the formic acid. The catalytic decomposition of HCOOH on metallic nickel applied to the surface of nickel and chromium oxides was then studied as a function of the temperature to which the carriers had been heated. Minimal activation energy was discovered in the case of nickel which had been applied to a carrier heated at 800C. In the opinion of the authors, this result, along with the data derived from the study of the electrical properties of the oxide mixture, points to a special feature of the state which develops during the formation of spinel. Orig. art. has: 7 figures and 1 table.

ASSOCIATION: Institut neorganicheskoy i analiticheskoy khimii Universiteta g. Seged (Institute for Inorganic and Analytical Chemistry of the University of Szeged, Hungary)

SUBMITTED: 23Oct62 ENCL: 00 SUB CODE: MM, IC

Card 2/2 NO REF SOV: 000 OTHER: 011

SHOL'NIKOV, M. B.

AID P - 791

Subject : USSR/Mining

Card 1/1 Pub. 28 - 1/11

Authors : Shol'nikov, M. B. and Sud, I. I.

Title : Automatic well drilling regulator of the BAR-150 type

Periodical : Energ. byul. #7, 1-9, Jl 1954

Abstract : General arrangement and electrical design of automatic control equipment for well drilling operations is described with special attention to the feed of the bits. Electric circuit and energy distribution is illustrated by 8 diagrams.

Institution : None

Submitted : No date

ROMANTSEVICH, M.K. [Romantsevych, M.K.]; SHOLOGON, I.M. [Sholohon, I.M.]; BARANOVSKAYA, N.F. [Baranovs'ka, N.F.]; SIRENKO, N.N.

Synthesis of dicyclopentadienedicarboxylic acid. Khim. prom. [Ukr.] no.1:20-22 Ja-Mr '65. (MIRA 18:4)

L 21778-66 EWT(m)/EWP(j)/EWP(t) IJP(c) JD

ACC NR: AP6002511 SOURCE CODE: UR/0286/65/000/023/0018/0018

AUTHORS: Sholagon, I. M.; Kapitonov, V. M.; Romantsevich, M. K.

ORG: none

TITLE: A method for obtaining bicyclopentadienyl titanium derivatives, containing silicon. Class 12, No. 176583 [announced by Ukrainian Scientific Research Institute for Plastics (Ukrainskiy nauchno-issledovatel'skiy institut plastmass)]

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 23, 1965, 18

TOPIC TAGS: organotitanium compound, organosilicon compound, organic chemistry, titanium, silicon, sodium

ABSTRACT: This Author Certificate presents a preparative method for obtaining bicyclopentadienyl titanium derivatives containing silicon. The sodium derivatives of cyclopentadienyltrialkyl (aryl) silanes are treated with titanium tetrachloride at -30 to -40C in an organic solvent, e.g., tetrahydrofurane.

SUB CODE: 07/ SUBM DATE: 30Nov64

Card 1/1 UDC: 547.419.5/6:514.721.07

ACC NR: AP6033182 SOURCE CODE: UR/0079/66/036/010/1846/1848

AUTHOR: Shologon, I. M.; Romantsevich, M. K.

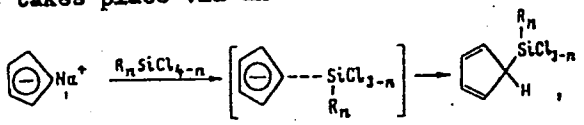
ORG: none

TITLE: Synthesis and reactions of silicon-containing derivatives of cyclopentadiene. Part 1: Cyclopentadienylchlorosilanes

SOURCE: Zhurnal obshchey khimii, v. 36, no. 10, 1966, 1846-1848

TOPIC TAGS: organosilicon compound, silane, organosodium compound, chemical synthesis, chemical reaction

ABSTRACT: In an attempt to develop an effective method for preparing cyclopentadienylchlorosilanes, the condensation of cyclopentadienylsodium with silicon tetrachloride and organochlorosilanes was investigated. It is postulated that the condensation with chlorosilanes takes place via an ionic mechanism:



where R is an organic radical or chlorine, and n = 0, 1, 2, 3. Relatively high yields (60-70%) of cyclopentadienylchlorosilanes were obtained by adding a cyclopentadienylsodium suspension in toluene to an equimolar quantity of the initial chloro-

UDC: 546.287

Card 1/2

ACC NR: AP6033182

silane if the reaction temperature is maintained at -15 to 0°C. Some properties of the compounds obtained are shown in Table 1. Orig. art. has: 1 table.

Compound	Yield (%)	B.P (p in mm)	n_D^{20}	d_4^{20}	MR_D measured	MR_D calculated
$C_6H_5SiCl_3$	58.3	46—48° (4)	1.5100	1.3632	43.79	44.77
$C_6H_5Si(CH_3)Cl_2$	72.5	47—49 (8)	1.4920	1.1622	44.73	44.83
$C_6H_5Si(C_2H_5)Cl_2$	63.9	76—78 (10)	1.4982	1.1530	49.12	49.34
$C_6H_5Si(CH=CH_2)Cl_2$	37.4	63—65 (8)	1.5070	1.1710	48.56	48.99
$C_6H_5Si(C_6H_5)Cl_2$	70.2	135—136 (6)	1.5666	1.2266	64.28	64.65
$C_6H_5Si(CH_3)_2Cl$	60.2	54—56 (14)	1.4870	1.0048	45.43	45.75
$C_6H_5Si(C_2H_5)_2Cl$	62.5	78—80 (17)	1.4675	0.9986	53.83	54.31
$C_6H_5Si(CH=CH_2)Cl$ $\lvert$ CH_3	60.4	74—75 (23)	1.4970	1.0139	49.26	49.45

SUB CODE: 07/ SUBM DATE: 11Sep65/ ORIG REF: 002/ OTH REF: 005

Card 2/2

L 44571-66 EWT(m)/EWP(j) IJP(c) RM

ACC NR: AP6015676 SOURCE CODE: UR/0413/66/000/009/0077/0077

INVENTOR: Shologon, I. M.; Moshinskiy, L. Ya.; Romantsevich, M. K.

ORG: none

TITLE: Method of obtaining organosilicon resins. Class 39, No.181297 [announced by Ukrainian Scientific Research Institute of plastics (Ukrainskiy nauchno-issledovatel'skiy institut plastmass)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 9, 1966, 77

TOPIC TAGS: resin, organosilicon resin, organosilicon compound

ABSTRACT: An Author Certificate has been issued for a method of obtaining organosilicon resins by the condensation of silicon organic compounds with polydydric alcohols upon heating. To expand the variety of initial compounds, alkoxysilylendomethylenetetrahydrophthalic anhydride is suggested as the organosilicon compound. [Translation] [NT]

SUB CODE: 11/ SUBM DATE: 09Jul64/

Card 1/1 UDC: 678.6:661.72

[redacted], P.I., inzh.; YAKOVSKIY, V.I., inzh.

All-purpose E-4010 excavator-planer. Stroi. i dor. mash. 9 no.1: 6-9 Ja '64. (MIRA 18:7)

ACCESSION NR: AP4041787 S/0191/64/000/007/0059/0062

AUTHOR: Gubenko, A. B., Freydin, A. S., Sholokhava, A. B., Aarna, A. Ya., Kiysler, K. R.

TITLE: Synthetic adhesives based on DFK resins from the divalent phenols of oil shales

SOURCE: Plasticheskiye massy*, no. 7, 1964, 59-62

TOPIC TAGS: synthetic adhesive, resin, DFK resin, phenol, oil shale, bond strength, adhesion, marshalite, silicon calcite, divalent phenol, adhesive

ABSTRACT: Preliminary experiments showed that among all resins of the DFK type, the most promising for bonding cement materials is the resin DFK-1A. The influence of different fillers on the bond strength of asbestos cement glued with an adhesive based on DFK-1A was therefore investigated in the dry state and after a 24-hour wetting. The best strength characteristics were obtained with ground silicon-calcite, marshalite and hydrophobic sand (the latter produced by the Institut lesokhozyaystvenny*kh problem AN Latv. SSR (Institute of Forestry Problems, An Latv. SSR) from dune sand treated with wood resin).

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ACCESSION NR: AP4041787

Addition of aluminum powder to the adhesive (3-5% of the resin) increased the bond strength by 30-50% with marshalite and by 100% with sand. Aluminum powder considerably increased the adhesion to metals. The relationship between bond strength and exposure time was then investigated for a minimum exposure time of 18 hours under pressure. Adhesion was found to be accelerated by heating (60 - 80C). By heating under pressure, the adhesion time could be reduced to 15-30 min. and a higher bond strength was obtained than with cold pressing (50 and 25 kg/cm^2, respectively). The dependence of complete hardening on the hardening conditions and fillers in the DFK-1A is shown by tabulated data. The behavior of the adhesive bond under the influence of high temperature and humidity is discussed, and the possible uses of the adhesive are described in detail. Orig. art. has: 2 tables and 2 figures.

ASSOCIATION: None

SUBMITTED: 00 DATE SEL: 30Jul64 ENCL: 00

SUB CODE: MT NO REF SOV: 007 OTHER: 000

Card 2/2

Sholokhov, A.A.

2(6) PHASE I BOOK EXPLOITATION SOV/3501

Akademiya nauk SSSR. Energeticheskiy institut

Voprosy teploobmena (Heat-Exchange Problems) Moscow, 1959. 237 p. Errata slip inserted. 2,800 copies printed.

Resp. Ed.: M.A. Mikheyev, Academician; Ed. of Publishing House: G.B. Gorshkov; Tech. Ed.: I.F. Kuz'min.

PURPOSE: This collection of articles is intended for scientific workers, engineers, and postgraduate students specializing in thermodynamics.

COVERAGE: The collection reviews problems of heat transfer and explores possibilities of intensifying heat exchange. The heat exchange theory is outlined, and its development is mentioned. Thermophysical properties of some molten metals and alloys are analyzed, and methods used to determine them presented. Equipment used for measuring thermal conductivity, heat capacity, and kinetic viscosity of these metals are discussed. Results of experimental study of the intensified heat exchange for a water flow in an annular channel are analyzed and the instruments used along with the pilot plant for studying convection heat exchange in contacting nonmiscible fluids are described. Instruments and equipment used for determining the linear expansion of metals, the consumption of a liquid, and the absorption capacity of a surface are also described and illustrated. A number of equations for solving various thermodynamic problems are presented. Each article is accompanied by references, the majority of which are Soviet.

TABLE OF CONTENTS:

PHASE I BOOK EXPLOITATION SOV/4396

Akademiya nauk SSSR. Energeticheskiy institut

Konvektivnyy i luchistyy teploobmen (Convection and Radiation Heat Exchange) Moscow, Izd-vo AN SSSR, 1960. 254 p. Errata slip inserted. 3,200 copies printed.

Ed.: M.A. Mikheyev, Academician; Ed. of Publishing House: G.B. Gorshkov; Tech. Ed.: V.V. Bruzgul'.

PURPOSE: The book is intended for scientists and engineers working in various branches of science and industry concerned with thermodynamics and heat transfer problems.

COVERAGE: The book consists of 19 original articles on various problems in thermodynamics. The following subjects are discussed: mechanism of heat transfer processes, intensification of heat exchange, determination of thermophysical properties of operating media, heat transfer in supersonic flow of gas, and combustion chambers and nuclear reactors. Theory and experimental techniques are described. Each article describes the conditions of the experiment and tables of the experimental data obtained are given. The data may be used for calculations of heat transfer and heat exchangers, always taking account of ...

AVAILABLE: Library of Congress

S/803/62/000/003/001/012
D201/D308

AUTHORS: Gribanov, Yu.I., Kalutskaya, K.D., Kelesnikov, V.D. and Sholokhov, A.A.

TITLE: A bench for the analysis of transients in nuclear power installations

SOURCE: Moscow. Inzhenerno-fizicheskiy institut. Avtomatika i telemekhanika, no. 3, 1962. Sistemy upravleniya yadevnymi energeticheskimi ustanovkami, 5-15

TEXT: The authors describe a measuring bench built around the 24-channel OT-24-51 oscilloscope. The magnetic circuits of the frame galvanometer make the oscilloscope sufficiently sensitive to be operated directly from the pickups. The characteristics of the six types of galvanometers used are given. The circuit diagrams and the operation of all measuring channels is described. The operation of any channel depends on the type of channel pickup or on the measuring instrument. The measuring pickups or transducers are of the following types: 1) Chromel-alumel thermocouples with grounded hot

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terminals. 2) Resistor thermometers. 3) Induction type pickups. 4) Tachometric pickups. 5) Selsyn channels. 6) Channels with compensated ionization chambers KHK-53 (KNK-53) for measuring the neutron component of the reactor power. The bench is a modification of the tensometric device OT-24-51 designed by the 'Neftenpribov' plant of the Mosgorsovnarkhoz. The equipment has been successfully used for testing the automatic control systems of nuclear power plants operating under normal and emergency conditions. There are 6 figures and 1 table.

SHOLOKHOV, A.A.

Alteration of the temperature field in a solid body with rectangular insulated regions. Inzh.-fiz. zhur. 6 no.11: 76-84 N '63. (MIRA 16:11)

1. Fiziko-energeticheskiy institut, Obninsk.

USSR/Plant Diseases. Diseases of Cultivated Plants 0-3

Abs Jour : Ref Zhur - Biol., No 20, 1958, No 91991

Author : Sholokhov A.M.
Inst : State Nikitsk. Botanical Garden
Title : Injuries to Apricot Varieties Caused by the Blower Spot in the Steppe Zone of the Crimea.

Orig Pub : Byul. nauchn. inform. Gos. Nikitsk. botan. sad., 1957, No 5-6, 32-35

Abstract : This covered 62 varieties of European, Middle-Asiatic and Iran-Caucasian ecological and geographical groups on the variety development polt in the botanical garden of the "Dzhankoyskiy" collective farm. The studies were conducted with the view of determining the comparative occurrence of Clasterosporium carpophylum on the leaves of varieties from distinct geographical groups and also the determination of the disease resistance of the varieties within each geographical group. The greatest incidence of infection was noted among the Central

Card : 1/2

KALINOVSKAYA, Ye.Ya., inzhener; MESHCHERYAKOV, A.F., inzhener; PROVODIN, S.S., inzhener; SHOLOKHOV, A.N., inzhener

[Moscow; an index to a city map] Moskva; ukazatel' k planu-skheme. [Moskva] Mosgorispolkom, Arkhitekturno-planirovochnoe upravlenie, [1956] 28 p. (MLRA 10:8)
(Moscow--Directories)

MESHCHERYAKOV, A.F., inzh.; PROVODIN, S.S., inzh.,; KALINOVSKAYA, Ye.Ya.,
inzh.; SHOLOKHOV, A.N., inzh.; DUMESH, S.Ye., inzh.; SPIRINA, Ye.I.,
inzh.; ZATONSKAYA, M.I., inzh.; ZARILOVA, T.A., tekhnik; LITINA,
L.A., tekhnik; SHERDYUKOV, Ya.I., otv. red.

[Index to an illustrated map of Moscow] Moskva; ukazatel' k il-
liustrirovannoi skheme. Moskva, 1957. 47 p. (MIRA 14:9)

1. Mosgorgeotrest, Moscow.
(Moscow--Maps--Indexes)

MESHCHERYAKOV, A.F.,inzh.; PROVODIN, S.S., inzh.; KALINOVSKAYA, Ye.Ya., inzh.; SHOLOKHOV, A.N., inzh.; DUMESH, S.Ye., inzh.; SPIRINA, Ye.I., inzh.; ZATONSKAYA, M.I., inzh.; ZARILOVA, T.A., tekhnik; LITINA, L.A., tekhnik; SHCHERDYUKOV, Ya.I., otv. red.

[Index to an illustrated map of Moscow] Ukazatel' k illiustrirovannoi skheme Moskva. Moskva, 1957. 47 p. (MIRA 15:2)

1. Moscow. Arkhitekturno-planirovochnoye upravleniye.
(Moscow--Directories)

KLYUYEV, A., polkovnik; SHOLOKHOV, I., podpolkovnik

The seminar, a creative matter. Komm. Vooruzh. Sil 46 no.6:46-50 Mr '65. (MIRA 18:11)

1. Nachal'nik otdela propagandy i agitatsii politicheskogo upravleniya Zakavkazskogo voyennogo okruga (for Klyuyev).
2. Starshiy instruktor politicheskogo upravleniya Zakavakazskogo voyennogo okruga (for Sholokhov).

SHOLOKHOV, K.

Repairing fire automobiles. Pozh.delo 3 no.12:18 D '57.
(MIRA 10:12)
(Automobiles--Repairing)

SHOLOKHOV, K., inzh.

More attention to hose equipment. Pozh.delo 5 no.7:22-23 Jy '59. (MIRA 12:9)
(Fire departments--Equipment and supplies)

SHOLOKHOV, L. PA 22T11

USSR/Aeronautics Jul 1947
Flying, Night
Pilots - Training

"Instructing Fighter Pilots in Night Flying," L. Sholokhov, 6 pp

"Vestnik Vozdushnogo Flota" No 7 (341)

Training is conducted in Trainers Po-2 and Ut-2 which have blacked-out cockpits. Flights are conducted at altitudes not lower than 600 meters. The student pilots are taken around the course 2 or 4 times, after which they are flown around the course 8 - 10 times in a blacked-out cockpit. At this time they also practice night landing and take-off procedure. Deals briefly with night flying by radio navigation. Diagrams show lighting of landing strip at night. 22T11

NEUDACHIN, G.I.; SHOLOKHOV, L.G.

Double core barrel drills for shot and hard alloy drilling. Izv.vys.ucheb.zav.; geol.i razv. 2 no.11:101-107 N '59. (MIRA 13:6)

1. Sverdlovskiy gornyy institut.
(Boring machinery)

SHOLOKHOV, MIKHAIL ALEKSANDROVICH

Virgin soil upturned. London, Putnam (1935)
488 p.
Translation of the original Russian: Podnyataya tselina.
Published in the U.S. under the title: Seeds of tomorrow.

SHOLOKHOV, MIKHAIL ALEKSANDROVICH

The Don flows home to the sea. New York, Knopf, 1946 (c1940)
777 p.
Translated from the Russian.

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S/141/62/005/006/013/023
E192/E582

24,2500

AUTHORS: Litvak, A.G., Miller, M.A. and Sholokhov, N.V.

TITLE: A more exact form of the averaged equation of motion for charged particles in the field of a standing electromagnetic wave

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Radiofizika, v. 5, no. 6, 1962, 1160 - 1170

TEXT: The Van der Pol method can be used in describing the motion of a particle in the following manner:

$$\underline{r} = \underline{r}^{(1)} + \underline{r}^{(0)} \qquad (1)$$

where $\underline{r}^{(1)}$ is an oscillatory component and $\underline{r}^{(0)}$ is a slowly changing component. This description is valid when the motion is nonrelativistic:

$$\beta = v_0/c \sim \dot{r}^{(0)}/c \sim \dot{r}^{(1)}/c \ll 1 \qquad (2)$$

and when the oscillations of the particle are small in comparison with the characteristic dimension L_E of the field irregularity, i.e.

A more exact form ....

$$\alpha \sim r^{(1)}/L_E \ll 1 \qquad (3)\ .$$

Further, the transit time of the particle through a non-homogeneous region should be much greater than the period of the field, i.e:

$$\gamma = v_o/\omega L_E \sim \dot{r}^{(0)}/\omega L_E \sim \dot{r}^{(1)}/\omega L_E \ll 1 \qquad (4)\ .$$

In the case of a monochromatic sinusoidal field the oscillatory component is described by:

$$\underline{r}^{(1)} = -(\eta/\omega^2)\underline{E}(\underline{r}^{(0)})e^{i\omega t} \qquad (5)$$

$$\underline{r}^{(1)} = -(i\eta/\omega)\underline{E}(\underline{r}^{(0)})e^{i\omega t}$$

and the slowly changing component is given by:

$$\frac{d^2\underline{r}^{(0)}}{dt^2} = -\nabla\Phi_o(\underline{r}^{(0)}) \qquad (6)$$

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A more exact form ....

where:

$$\Phi_o(\underline{r}^{(0)}) = |\eta \underline{E}/2\omega|^2 \quad .$$

Analysis of this equation is based on the assumption that there exists an integral:

$$(\underline{r}^{(0)})^2/2 + \Phi_o(\underline{r}^{(0)}) = \text{const} \qquad (7)$$

for the averaged energy of the system. An attempt is made to evaluate the validity of this method by introducing a more exact equation containing expansion terms of the third order. It is assumed that the particles move in linearly polarized standing waves, described by:

$$\underline{E}(\underline{r}, t) = E_o \underline{e}(\underline{r})\cos(\omega t); \quad \underline{H}(\underline{r}, t) = H_o \underline{h}(\underline{r}) \sin(\omega t) \qquad (8)$$

where E_o and H_o are the amplitudes and $\underline{e}$ and $\underline{h}$ are normalized field-distribution functions. First, it is found that Eq. (6) can be made more exact by introducing expansion terms with regard

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A more exact form ....

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to parameters β and α, while the parameter $\chi = \beta/\gamma$ is an arbitrary quantity. The field components e and h are therefore expanded with respect to α and averaged equations of motion are derived on the basis of the relativistic equation. The averaged equations are employed to investigate the motion of a particle in a transverse electromagnetic standing wave and it is found that the exact formulae lead to an increase $\delta\Phi$ in the potential. This increment is a function of α, χ and β. Similar conclusions regarding the potential increment are arrived at in the case of a particle moving in the standing wave of the TM type. The exact formula can be primarily used for determining the accuracy of the first approximation (as calculated from Eq. 6).

ASSOCIATION: Nauchno-issledovatel'skiy radiofizicheskiy institut pri Gor'kovskom universitete (Scientific Research Radiophysics Institute of Gor'kiy University)

SUBMITTED: April 23, 1962

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L 6781-65 EWT(l)/EWG(k)/EPA(sp)-2/EPA(w)-2/EEC(t)/T/EEC(b)-2/EWA(m)-2 Pz-6/ Po-4/Pab-24/Pi-4 IJP(c)/ASD(a)-5/AFMD(t)/RAEM(a)/AFETR/ESD(c)/ESD(dp)/ESD(gs)/ ESD(t)/RAEM(t) AT

ACCESSION NR: AP4044099 S/0141/64/007/003/0452/0459

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AUTHOR: Sholokhov, N. V.

TITLE: On the scattering of electromagnetic wave by a nonequilibrium plasma

SOURCE: IVUZ. Radiofizika, v. 7, no. 3, 1964, 452-459

TOPIC TAGS: transverse wave interaction, plasma electromagnetic wave, electron drift, correlation statistics, electromagnetic wave scattering

ABSTRACT: The author calculates the contribution of transverse waves in a plasma to the cross section for the scattering of electromagnetic waves by a system constituting a plasma and a beam. Solution of the appropriate Maxwell equations shows that the scattering of electromagnetic waves by the plasma is determined completely by the correlation of the electron density fluctuations. The spectral correla-

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ACCESSION NR: AP4044099

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tion functions in the non-equilibrium plasma are calculated by the procedure of Yu. L. Klimontovich and V. P. Silin (DAN SSSR v. 145, 764, 1962), which permits a relatively simple calculation of both the Coulomb particle interaction and the transverse field. To simplify the analysis, it is restricted to an examination of electron drift in the plasma. The account of the transverse waves shows that anomalous scattering may take place in a collisionless plasma when the beam velocity is smaller than the ion thermal velocity, provided the characteristic dimension of the system is larger than or of the order of a certain critical wavelength, the value of which is estimated. "I thank V. P. Silin for guidance of the work." Orig. art. has: 3 figures and 30 formulas.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva AN SSSR (Physics Institute, AN SSSR)

SUBMITTED: 11Jun63 ENCL: 00

SUB CODE: ME, EM NR REF SOV: 006 OTHER: 003

Card 2/2

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